Bill's Unit Converter

Contents

Time required: 60 minutes

This program will start by asking the user what type of conversion they wish.

We are also going to build a utils file for Python that we can use in our future programs.

- Create a module file named **utils.py** You can add commonly used functions to this as we work with Python.

Enter the following code.

```
"""
    Name: utils.py
    Author:
    Created:
    Purpose: A utilty module with commonly used functions
"""

def get_title(program_title):
    """
        Takes in a string argument
        returns a string with ascii decorations
    """
    # Get the length of the statement
    text_length = len(program_title)

    # Create the title string by concatenation

    title_string = "+--" + "-" * text_length + "--+\n"
    title_string = title_string + "|  " + program_title + "  |\n"
    title_string = title_string + "+--" + "-" * text_length + "--+"

    # Return the contatenated title string
    return title_string
```

From a menu, the user can choose from the following conversions. Each conversion will have a separate function.

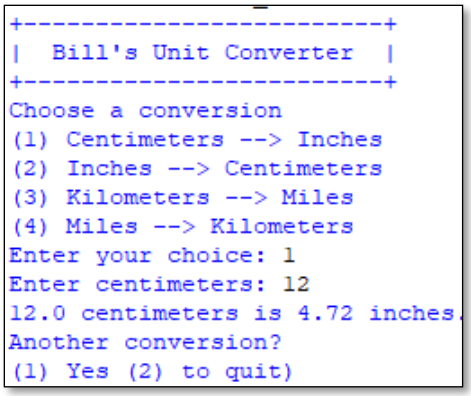
- Cm to Inches
- Inches to Cm

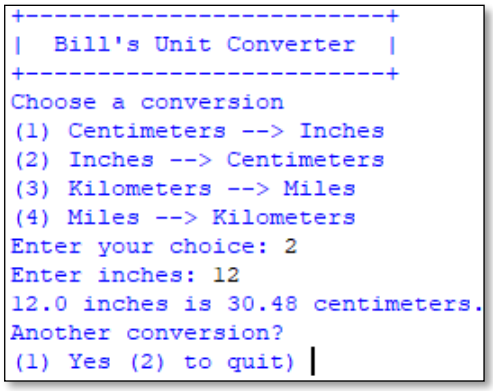
- Km to Miles
- Miles to Km
- Create a program named **unit_converter.py** that asks the user to enter a length in centimeters.
- Round the results to 2 decimal places.
- You will want to use a while loop menu as we have done in the past.
- This example code shows how to import the **utils** module and use the **utils.get_title()** function.

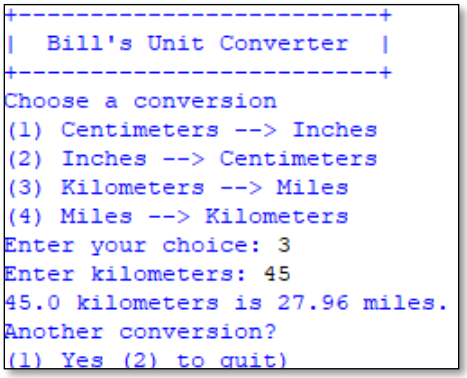
```
"""
    Name: unit_converter.py
    Author:
    Created:
    Purpose: Convert from one measurement to another
    Do not allow negative numbers
"""
import utils

def main():
    # Print the title of the program
    print(utils.get_title("Unit Converter"))

```

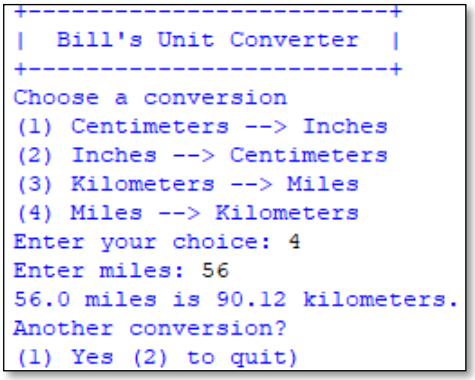
- Use a main function to run the program.
- If the user enters a negative length, the program should tell the user that the entry is invalid.
- Otherwise, the program should convert the length and print out the result.
- This is an example of the centimeters to inches function. There are 2.54 centimeters in an inch.

Example runs:









Assignment Submission

1. Attach the pseudocode.
2. Attach the program files.
3. Attach screenshots showing the successful operation of the program.
4. Submit in Blackboard.